

PUBLIC CONTROL AT THE NATIONAL LEVEL
of the
DEVELOPMENT AND USE OF ENERGY RESOURCES

S U B M I S S I O N
of the
GOVERNMENT OF SASKATCHEWAN
to the
ROYAL COMMISSION ON ENERGY

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SUBMISSION OF THE GOVERNMENT OF SASKATCHEWAN
TO THE ROYAL COMMISSION ON ENERGY
in the matter of
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PUBLIC CONTROL AT THE NATIONAL LEVEL OF THE
DEVELOPMENT AND USE OF ENERGY RESOURCES

I. Necessity for Public Control

Few aspects of the economy are as vital to the nation as the adequate development and efficient use of energy resources. To a very great extent the nation's standard of living and certainly its industrial progress are dependent upon the availability of large quantities of heat, power and fuel at prices and at locations which permit their maximum utilization.

The supply of many sources of energy is, of course, limited. Furthermore, the principal supplies are not uniformly distributed in Canada. Central Canada has little or no local supplies of petroleum, natural gas and coal. To a considerable extent the great industrial growth of this area has been based on electricity generated from water power. However, the readily accessible hydro sites have now been fully developed and transmission of hydro power from the more remote sites is today uneconomic.

Similarly, there can be no complacency about supplies of oil and gas. Until recent years Canada has been almost wholly dependent on outside supplies of petroleum, gasolines and fuel oils. Purchases of these commodities have been among our heaviest imports. Although new discoveries and increased production in Western Canada have in the last few years reduced this dependence on foreign sources, major problems remain. The largest Canadian markets are far removed from the producing areas; oil and gas must therefore be transmitted over distances that are among the longest in the world, with inevitably higher costs. At the same time, producers are finding that the alternative United States market is subject to arbitrary restriction and is therefore not dependable. Moreover it must be recognized that in the foreseeable future the reservoirs of oil and gas in Western Canada will be exhausted and that supplies of these valuable fuels will then become uncertain.

Reserves of bituminous coal are extensive both in the Maritimes and in Alberta. However, the costs of producing this energy resource and transporting it to the areas where it is most needed have long been so high in relation to other forms of energy as almost

completely to prevent its unaided movement into those areas. Thus, despite immense coal reserves, Canada has for years imported more bituminous coal than it has produced.

A new source of power, which will probably be an important factor as early as the late 1960's or early 1970's, is atomic energy. The energy potential of uranium is very great and, unlike other forms of energy, the cost of transporting it is relatively low. However, because of the very costly and highly technical processes by which uranium is transformed into atomic energy, and because of defence security requirements, this development is likely to require federal financial and technical assistance as well as some degree of federal supervision for years to come. Furthermore, the cost is such that its initial use will probably be limited to areas of large power requirements with relatively high conventional power costs.

The distribution of power, electricity or natural gas is regarded widely as properly constituting a public utility. Normally such distribution systems are not subject to competitive checks, thus, public regulation of rates in these fields has long been accepted as in the general interest.

Considerations such as these, among others, have necessitated increasing public control over the development, conservation and use of various sources of energy supply. Public bodies have been established in every province to deal with various aspects of the production, transmission, sale and use of fuel and power, and at the national level several departments and agencies of government are also charged with various responsibilities in connection with fuels and energy.

II. Present Federal Regulation of Energy

Governmental regulation of energy has grown up in a somewhat haphazard manner. The several federal bodies concerned with energy resources have in the main been developed to meet particular problems in relation to specific situations. Until recently there has been very little co-ordination or correlation of these bodies one with the other. No less than half a dozen federal government departments are

concerned with some aspect of energy production.

The Department of Mines and Technical Surveys has charge of such bodies as the Dominion Coal Board, which is responsible for studying and recommending to the government policies respecting the production, import, distribution and use of coal in Canada. This board also advises on and administers transportation subventions and other subsidies relating to coal. The Geological Survey of Canada obtains and makes available information of assistance in the search for minerals, as well as data on the geology of mineral fuels. Base maps for use in the development of Canada's natural resources are constructed and made available by the Surveys and Mapping Branch. The Fuels Division of the Mines Branch studies the type, quality and uses of all fuels, production methods, preparation and utilization, and analyses of crude oils and natural gas products. The Mineral Resources Division makes recommendations on tax exemptions for new mining properties, tax deductions as incentives in the search for petroleum and natural gas and tax allowances for drilling deep test wells for oil in unproven fields.

The production of power in the Yukon, North West Territories, national parks and Indian reserves is the responsibility of the Department of Northern Affairs and National Resources. Federal control of interprovincial oil and gas pipelines, their location, construction, operation and rates, is the responsibility of the Board of Transport Commissioners under the Minister of Transport. The St. Lawrence Seaway Authority, with its responsibility for power production as well as transportation along the seaway, is also under this department. The development of power sites and the conservation of water in international rivers is under the jurisdiction of the International Joint Commission, the Canadian section of which is responsible to the Minister of External Affairs.

The Northern Ontario Pipe Line Crown Corporation, the Atomic Energy Control Board, the Atomic Energy of Canada Limited, and control over the export and import of power, are responsibilities of the Minister of Trade and Commerce. This Minister, as Chairman of the Privy Council Committee on Scientific and Industrial Research, is also responsible to Parliament for the National Research Council, the

work of which in the energy field has ranged all the way from aspects of the production of atomic energy to the determination of standard specifications for oils and lubricants. The Chairman of the Privy Council Committee also reports to parliament on the Eldorado Mining and Refining Limited which is responsible for radioactive minerals. Some research projects have also been carried out by the Defence Research Board under the Minister of National Defence. Federal taxation and tax exemptions with respect to sources of energy are dealt with, of course, by the Minister of Finance and National Revenue.

Clearly, the federal government is already active with respect to many facets of energy production and use. It is true that intra-provincial fuel and power matters are exclusively within the jurisdiction of the provinces. This is as it should be. Nevertheless, the precedent for federal energy regulation and federal administration of certain energy policies in the national interest is already well established.

III. Importance of Co-ordination

Recent years have witnessed a growing recognition of the interdependence of energy sources and the importance of co-ordinating governmental policies with respect to them. Thus, there has been established a Federal Interdepartmental Committee on Energy, composed of representatives from the various departments, bodies and agencies of government concerned, to centralize information and to investigate the relationship of sources of energy to the national economy.

It has been increasingly apparent, however, that this limited degree of co-ordination is inadequate and that federal energy policies and programs must be more closely related. No longer can individual policies be considered in isolation. Both the supply of energy resources and their uses have been changing rapidly and substantially.

The use of wood as a fuel, fairly extensive only a few years ago, has now greatly diminished. Petroleum and natural gas in many sectors of the economy are replacing coal as the principal fuel. As was indicated above, availability of additional hydro sites is very limited; in the future public utilities will be increasingly dependent upon

thermally produced electricity from both coal and nuclear fuels.

The manufacturing industries have been consuming an increasing proportion of the total power used in the economy. But railroads, because of changes in equipment such as the introduction of diesel units, are now consuming a declining share of the nation's fuels. Similarly, household and commercial uses of fuels have decreased as a proportion of the total.

For all of these reasons neither the supply nor the use of any of these sources of energy can be considered in isolation. It is increasingly apparent that governmental policies with respect to these sources of energy must be correlated.

IV. Importance of Reducing Costs

When compared to the United States, unit costs of industrial production in Canada are high. This is true despite the fact that hourly earnings of Canadian workers are as much as 25 per cent below those of American workers. In large part, higher costs are a reflection of Canada's limited market which denies the country many of the economies of mass production. A second major factor, however, lies in Canada's geography which necessitates long hauls and consequent higher transportation costs. The end result of these two factors is that the consumer cost of manufactured goods here is some 10 to 15 per cent higher than in the United States.

One avenue by which governmental control in Canada can help to alleviate this condition is through public regulation and financial assistance designed to keep transportation costs to a minimum.

Another and equally important means by which the government can and should help to reduce costs is through ensuring that energy costs are kept to a minimum and that every effort is made to improve the efficiency with which energy is produced, transported and used. It is obvious that the price of energy is extremely important in the shift from labour intensive to capital intensive plants.

V. Objects of a National Energy Policy

Before consideration can be given to the most desirable form of administration of national policies with respect to energy sources, it is necessary first to consider the objectives of such policies and the means through which those objectives may be realized. The objectives may be briefly stated:

1. To increase the use of fuel and power in production. The greater the extent to which natural sources of energy can be put to work in productive processes, the greater and more efficient will be the industrial capacity of the nation. As was indicated above, this is one of the principal means by which the industrial progress and well-being of the nation may be measured. As was pointed out by Dr. John Davis in his study of energy prospects for the Royal Commission on Economic Prospects*, the countries which have put energy to work intensively are the ones enjoying the highest standards of living. The availability of large quantities of low cost energy for industrial purposes will help substantially to offset other disadvantages and handicaps from which Canadian industry suffers and to which reference has already been made.

2. To conserve and direct the use of energy resources.

As has already been indicated, the supply of some forms of energy in Canada is quite limited. Furthermore, some forms of energy are uniquely suited to particular uses. Natural gas is a good example. This is, of course, an exhaustible resource and, as such, will be available for only a limited period. Therefore, to the extent that federal policies can influence the use to which natural gas is put, they should tend to encourage its use for and to restrict its use to those purposes for which it is uniquely or best suited. Similarly with other fuels and sources of energy.

3. To ensure that so far as is practicable fuel and power resources are equitably distributed to all sections of the populated area of Canada. As has already been noted some sections are fortunately situated with respect to one or more sources of energy whereas other parts of the country are deficient. It should be an aim of

* Canadian Energy Prospects, by Dr. John Davis, Royal Commission on Economic Prospects, Queen's Printer, Ottawa, 1957, p. 1.

national policy to ensure that low cost power and fuel will be available to every part of the country and that, if possible, no community will be wholly dependent on one particular energy source.

VI. Means by Which Objectives may be Realized

While jurisdiction over natural resources including sources of energy, as well as over the production and intra-provincial movement or transmission of energy, in whatever form, is and should remain within the purview of provincial governments (with the exception of the Yukon, North West Territories, national parks, etc.), federal policies can and should be devised and implemented which would help to achieve the objectives mentioned above without encroaching on this basic provincial jurisdiction.

Taxation. One extremely important instrument of federal policy is taxation. Federal taxation policies can and should be devised which will encourage the search for and production of various forms of fuel. Furthermore, these taxation policies concerning various forms of energy supply should be correlated one with the other. Since the incidence of taxation can be a very important element of cost in energy production this is one area in which the federal government can assist greatly in holding energy costs down so as to make fuel and power available to industry, and to the public generally, at the lowest possible price.

Subventions. Related to federal taxation policies are subventions of various kinds. In the past, subventions have chiefly been used in connection with coal. Transportation subventions have been available for the past 30 years to assist the movement of coal into specific areas, principally in Central Canada. Another has been in the form of a bounty paid to encourage the use of coal for coking purposes under the Canadian Coal Equality Act.

Research. Another fruitful area for Dominion Government activity in relation to energy production, transmission and use is in the field of research. There is, of course, a considerable amount of research now being carried on by federal government departments and agencies: by the National Research Council; by the Defence

Research Board; by the Dominion Coal Board; by the Fuels Division of the Department of Mines and Technical Surveys; by the Mineral Deposits Division (on uranium deposits for the Atomic Energy Control Board); and by Atomic Energy of Canada Limited (with respect to fundamental research in the atomic energy field). One of the largest industrial research establishments in Canada, which is maintained by the publicly-owned Polymer Corporation at Sarnia, Ontario, is studying the use of petroleum for synthetic rubber production.

Geological studies and surveys, geodetic services and other activities of the federal Department of Mines and Technical Surveys are of prime importance to persons and concerns engaged in the search for and production of oil, gas, uranium, coal, water power etc. At the same time, various provincial government agencies as well as private industries are engaged in similar as well as other research. A major contribution could be made by an appropriate federal government agency undertaking some co-ordination of these research programs and facilitating the exchange of information not only by federal agencies but the other research programs mentioned.

What kinds of research are dictated by modern needs? One major objective, of course, must be improvement in the efficiency with which energy in its various forms is produced, transported and applied in industrial processes. Because of the long distances over which energy in its many forms must be transmitted in Canada, any improvements in transportation and transmission methods and facilities to cut costs should be the object of intensive study. For example, there is room for considerable improvement in the means available for transporting coal. It has been suggested that specially designed collier fleets incorporating special types of loading and unloading equipment could cut the delivered cost of coal in some areas of eastern Canada very considerably. Similarly with railway equipment.* Much research remains to be done on economical methods of gasification of Canada's vast coal reserves both in the ground and at the surface to provide a practical substitute for natural gas against

* Canadian Energy Prospects, supra, p. 88

the time when natural gas supplies of Canada will begin to diminish. Much work also remains to be done in the thermal production of power from nuclear sources. This work is, of course, proceeding with the co-operation of Atomic Energy of Canada Limited, the Canadian General Electric Company and the Ontario Hydro Electric Commission.

Vast quantities of fuel and energy are lost today through the continued use of antiquated and inefficient equipment in homes, in institutions, in commercial establishments and in industry. If fuel and energy costs are to be reduced to the minimum it is important that research in this field be intensified so that the maximum efficiency may be obtained from heat exchangers and other energy converting equipment. Modernization should help to reduce what would otherwise constitute a very heavy drain on the nation's fuel and power resources.

It is well known that the efficiency of hydro systems for the production of electricity is approximately 85 per cent compared with only 30 per cent for electric power thermally produced. Since, as has been noted, the nation's power plants will be turning increasingly to thermal production of electric power, it becomes extremely important from the national point of view that research into methods of improving the efficiency of thermo-electric plants should be intensified.

In co-operation with private companies research should be continued and intensified into fuel composition, lubrication (particularly cold weather lubrication), improved methods of refining, the development of new products, improved quality of petroleum products and many other aspects of the oil and gas industry. A considerable amount of research has already been conducted, by both provincial and federal government agencies as well as by private companies, into the separation of oil from the tar sands of the Athabasca area in Alberta. Since it has been estimated that the oil in these sands exceeds the total proven reserves of petroleum of all the rest of the world the discovery of a low cost commercially feasible process for using these reserves would be of enormous benefit

to the nation.

These are only some of the directions in which federally-initiated research as well as federal action would facilitate better co-ordination of existing research programs, perhaps assist in discovering and making available additional sources of energy supply, and possibly increase efficiency and thereby lower energy costs to Canadian homes and industry.

Control of Pipelines. With the advent of long-distance pipe lines to carry petroleum and natural gas from the prairie provinces to the west coast, United States and eastern Canada, it is extremely important that federal control of these interprovincial and international pipe lines should be exercised in the interests of (a) keeping transmission rates to the minimum and (b) ensuring equitable treatment to all transporters of these products.

Three avenues of control over pipe lines are open. Some recognition has already been given to each of these:

- (a) public ownership of pipelines,
- (b) the common carrier principle,
- (c) public control of transportation charges.

The merit of public ownership of long-distance pipe lines was given some degree of acknowledgement in the construction of the northern Ontario section of the Trans-Canada gas pipe line project by the Northern Ontario Pipe Line Crown Corporation. For the reasons indicated in the submission of the Saskatchewan Government to the Royal Commission in Regina in April, 1958,* it is felt that transmission costs of oil as well as gas over long distances can be greatly reduced if pipe lines are publicly-owned. Furthermore, public ownership, by divorcing the transportation function from producer or other interests, can ensure that all producers will receive equitable treatment in transporting their oil to market.

Another, though less effective, method of accomplishing this same result is to declare pipe lines to be common carriers. Provision is made in the Pipe Lines Act by which the Board of Transport

* see p. 92

Commissioners is given power to declare inter-provincial oil pipe lines to be common carriers. It has not been exercised. No provision at all has been made for declaring natural gas pipe lines to be common carriers.

Similarly, authority is given to the Board of Transport Commissioners by the Pipe Lines Act to regulate traffic, tolls and tariffs of oil pipe line companies but no similar power is given with respect to gas pipe line companies. So far as is known, the Board has not exercised any of these powers. But, if the objectives of federal energy policies referred to above are to be realized, control of rates will have to be undertaken by a competent federal authority.

A corollary of federal control over rates and tariffs charged by interprovincial and international pipe line companies is that action will also have to be taken to ensure that accounting practices and policies of the pipe line companies are sufficiently uniform that accurate comparisons among them can be made. This too would have to be a function of the same public body.

As has just been indicated, the limited provisions for federal control now existing in this field are the responsibility of the Board of Transport Commissioners. This Board's chief experience and main concern has been and is in the regulation of railway traffic. In the few decisions it has made concerning pipe line operations it has followed precedents established in railway cases, even though the operations are not at all similar -- e.g. one-way traffic in pipe lines as compared with two-way traffic on railways. It would appear desirable that these functions should be handled by another body composed of members knowledgeable in the field whose chief concern would be this and other matters relating to energy. Reference may be made to the fact that the federal Air Transport Board was established to provide for necessary regulation in the particular field of air transportation as distinct from railway operations.

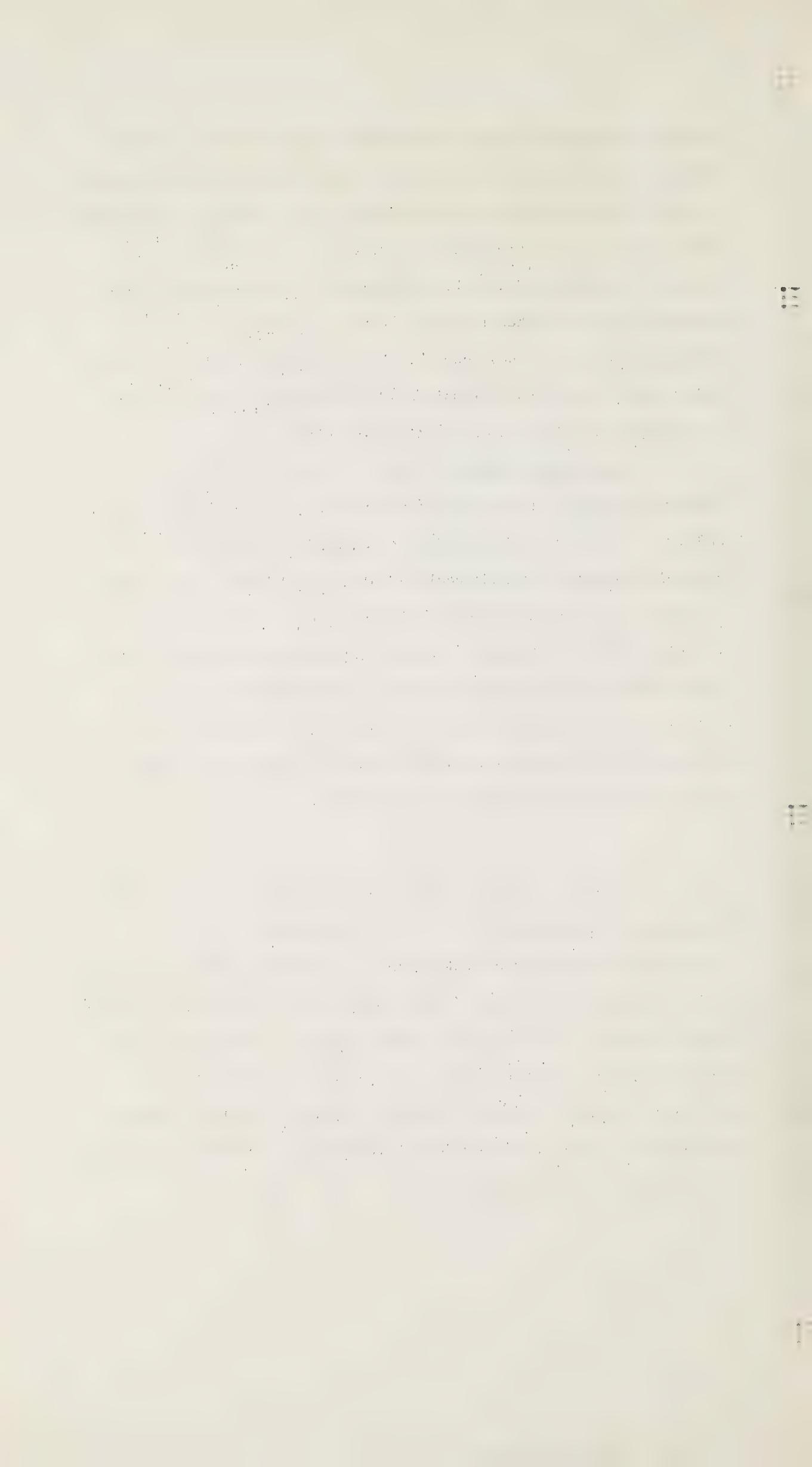
Federal assistance. On occasion the national interest requires that federal assistance be given to the provinces in the development of energy resources or that joint federal-provincial

projects be undertaken which are beyond the means of any particular province. An example is the instance already cited of the development of a thermo-electric plant using nuclear fuels. Another is the federal assistance made available in the construction of the Trans-Canada national gas system and for the development of electric power in the Maritimes. Still another is the St. Lawrence Seaway and its accompanying hydro-electric development. Other examples could be the South Saskatchewan Dam and the Columbia River development. Similar federal action may be required in other cases from time to time.

Export-Import Controls. Since problems are continually arising with respect to the export and import of energy in one form or another to and from the United States it would be advantageous if the national interests of Canada could be represented by one public body to conduct negotiations and make agreements etc. At present this control, to the extent that it is exercised at all, is divided: the International Joint Commission controls certain matters; the Department of National Revenue levies an export tax on electrical energy, and permits for the export of natural gas are issued on an ad hoc basis by the Department of Trade and Commerce.

* * *

The above are some of the more important avenues of activity which might be undertaken by a federal authority with a view to achieving the objectives of a national energy policy. There are others. It is necessary, for example, that an appropriate federal agency should conduct economic and engineering surveys, compile statistics, collect and make available marketing data, and assist in securing adequate and secure markets. A further specific task is to develop, produce and transmit energy in the North West Territories, the Yukon and other lands subject to federal jurisdiction.



VII. Appropriate Agencies for National Policy

Because of the important role which energy plays in the economy and the tremendous changes that have taken place in both the supply of and demand for energy, and in view of the many regulatory and administrative bodies with some jurisdiction and responsibility in the field of energy, it becomes increasingly important that national policies be integrated and actions directed toward common goals.

Constructive integration, it would seem to us, could best be achieved by formal action along three related lines: first, the consolidation of policy and administration at the federal level with respect to energy resources and use in an appropriate departmental structure; second, the constitution of a qualified quasi-judicial board to deal with matters of regulation falling within federal jurisdiction; and third, the establishment of a continuing federal-provincial advisory body to eliminate jurisdictional conflict and assure essential co-operation between the federal and provincial governments.

1. Co-ordination of Federal Government Agencies

Accordingly it is submitted that the various federal authorities which are dealing with energy matters should be consolidated, possibly under a federal ministry of energy resources answerable to the people of Canada through Parliament for the policies followed. While it may not be possible or desirable to bring under one department all the functions of the federal government which in some degree affect the production or transmission of energy, it is suggested that a very considerable consolidation can and should take place. The present Department of Mines and Technical Surveys is in fact now carrying a large share of work in this field and would seem to be an appropriate nucleus for the suggested consolidation.

The Department of Mines and Technical Surveys' primary function is to provide technological assistance in the development of Canada's mineral resources through investigations, studies and research in the fields of geology, mineral dressing and metallurgy, and geodetic, topographic and other surveys. Consequently the department's responsi-

bility extends over a very large part of Canada's energy potential -- the whole field of the mineral fuels including petroleum, natural gas, coal and uranium. The expanded department would have continued jurisdiction over this field and could co-ordinate its actions with the actions now taking place in other departments or agencies. Co-ordination is particularly important in the field of research, where there appears to be a need to clarify the relationships among the various research programs now being carried out by both Federal and Provincial Governments and private industry. Such a department could initiate and promote research, maintain liaison between the Federal Government and other agencies and governments which are carrying on research, and facilitate the exchange of results of the research conducted. In this way each agency -- governmental or otherwise -- would be better informed of the activities and results of the others.

The Dominion Coal Board, which is responsible for studying and recommending to the government policies respecting subventions on production, import distribution and use of coal in Canada should be clearly integrated in the proposed consolidation.

Additional functions of the expanded department might be:

1. To conduct surveys, collect and make available marketing data and assist in developing adequate marketing policies (for example policies with regard to the opening up of the Montreal oil market).
2. To develop standard accounting practices for pipe line companies so that comparable costs are available.
3. To inquire into and study the effect of Federal Government policies in connection with such matters as taxation and subventions with a view to the overall aspects of energy resources and to make recommendations to the government with respect to those policies.
4. To assume jurisdiction over the Atomic Energy Control Board, Atomic Energy of Canada Limited and Eldorado Mining and Refining Limited.
5. To assume responsibility for the Northern Ontario Pipe Line Crown Corporation.
6. To have jurisdiction over policies of federal assistance

to provincial and territorial governments in the development of energy resources.

2. Federal Energy Commission

It is obvious that some of the suggested functions and activities would require hearings, judgments and decisions by a body which was specially qualified and before which representations could be made by interested parties. It is submitted, therefore, that a Federal Energy Commission should be created, responsible to the government through the proposed department. This Commission would be a regulatory rather than an administrative board. It is suggested that it be composed of members who will represent the various regional interests and that it be governed by the broad objectives of national policy outlined earlier.

The Federal Energy Commission would have jurisdiction over the control of inter-provincial oil and gas pipe lines, their location, construction and operation and be responsible for regulating traffic, tolls and tariffs of these oil and gas pipe lines. The Commission would also have jurisdiction over the export and import of all forms of energy with power to hear applications and make recommendations to the Minister. The Commission would act as the government's agent in negotiations and agreements. In the event that negotiations were necessary between Canada and the United States Federal Power Commission, this might be the appropriate body to perform such a function.

3. Dominion-Provincial Energy Council

Because jurisdiction over natural resources, including sources of energy, as well as the production and intra-provincial movement or transmission of energy, in whatever form, is and should remain within the purview of provincial governments (with the exception of the Yukon, North West Territories, national parks, etc.), and because the federal government has jurisdiction over many other matters relating to energy including inter-provincial transmission and export, it becomes increasingly important that close liaison be maintained between the two levels of government and among the provinces themselves. Federal policies can and should be devised and implemented which would

help to achieve the overall objectives pointed out above without, however, encroaching on this basic provincial jurisdiction. Problems must also be considered with a view to special provincial circumstances and special provincial problems.

It is submitted, therefore, that a Dominion-Provincial Energy Council be established. Such a Council should take the form of a Ministerial body to study and advise on federal policies regarding the long-term use and regulation of energy resources. A body of this nature would keep the Federal Government informed of existing provincial problems and by bringing these problems before other provincial governments for consideration, make recommendations to the proper authorities. It would, no doubt, call upon the varied technical resources available or establish technical working committees as required.

Finally, having regard to the importance of the jurisdictional problem that has already arisen, we urge that a conference of representatives of the Governments of Canada and the Provinces be called immediately for the purpose of reviewing the Statutes of Canada and the Provinces with respect to jurisdiction over control and regulation of pipe lines. Recommendations could be made to change or modify the Statutes so as to reserve to Canada the necessary powers to control inter-provincial trade and commerce without infringing upon the powers of the Provinces to control matters properly within their jurisdiction.

* * *

The Government of Saskatchewan welcomes the inquiry of the Royal Commission on Energy into the particular aspect of the desirable organizational structure for guiding the development of federal policy with respect to energy. Recognizing the wide area of existing federal concern, the foregoing proposals are submitted in the belief that they will contribute to the more effective and appropriate discharge of federal responsibilities. In our view, they suggest a continuing administrative framework whereby a useful and necessary follow-up to the work of the Royal Commission might be assured.

